# PATENT COOPERATION TREATY

# **PCT**

# TRANSLATION INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 0000055143	FOR FURTHER ACTION	See Form PCT/IPEA/416		
International application No.	International filing date (day/month/yea			
PCT/EP2004/013990	09.12.2004	11.12.2003		
International Patent Classification (IPC) or nat	onal classification and IPC			
C08G18/48, C08G18/66	, С08Ј9/32			
Applicant				
BASF AKTIENGESELLSCH	AFT			
This report is the international preli- under Article 35 and transmitted to the		by this International Preliminary Examining Authority		
2. This REPORT consists of a total of	7 sheets, i	ncluding this cover sheet.		
3. This report is also accompanied by A	NNEXES, comprising:			
a. (sent to the applicant and	to the International Bureau) a total of _	3 sheets, as follows:		
sheets of the descrip	otion, claims and/or drawings which have	e been amended and are the basis for this report and/or		
sheets containing re Instructions).	ctifications authorized by this Authority	(see Rule 70.16 and Section 607 of the Administrative		
		rity considers contain an amendment that goes beyond		
the disclosure in the Box.	e international application as filed, as in	dicated in item 4 of Box No. I and the Supplemental		
b. (sent to the International	Bureau only) a total of (indicate type and	number of electronic carrier(s))		
(Selle to the fluctuational	Dureau oray) a total of (maleure type and			
related thereto, in compute	readable form only, as indicated in the	, containing a sequence listing and/or tables  Supplemental Box Relating to Sequence Listing (see		
Section 802 of the Adminis		Topped and the service and the		
4. This report contains indications relati	ng to the following items:			
Box No. I Basis of the	report			
Box No. II Priority				
Box No. III Non-establi	shment of opinion with regard to novelty	, inventive step and industrial applicability		
Box No. IV Lack of uni	ty of invention			
BON 110. 1				
Box No. VI Certain doc	Box No. VI Certain documents cited			
Box No. VII Certain defe	Box No. VII Certain defects in the international application			
Box No. VIII Certain obs	Box No. VIII Certain observations on the international application			
Date of submission of the demand	Date of completi	Date of completion of this report		
Name and mailing address of the IPEA/EP	Authorized office	Authorized officer		
_				
Facsimile No.	Telephone No.			

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Box	No. I		Basis of the report		
1.			to the language, this report is based on the internation der this item.	nal application in the language in	which it was filed, unless otherwise
		This report is based on translations from the original language into the following language which is the language of a translation furnished for the purposes of:			
		<u></u> i	international search (Rule 12.3 and 23.1(b))		
			publication of the international application (Rule 12.4	)	
		∐ i	international preliminary examination (Rule 55.2 and/	for 55.3)	
2.	With regard to the <b>elements</b> of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):				
		the int	ernational application as originally filed/furnished		
	$\boxtimes$	the de	scription:		
		pages	1-7		as originally filed/furnished
		pages*			
		pages*	k	received by this Authority on	
	$\boxtimes$	the cla			
					as originally filed/furnished
		nos.			
		nos.*	1.0		
		nos.*			/filed with the demand
	$\overline{}$	nos.*		received by this Authority on	
	Ш	the dra	awings:		
		sheets			as originally filed/furnished
		sheets'	*	received by this Authority on	
		sheets	*	received by this Authority on	
		a sequ	ence listing and/or any related table(s) – see Supplem	ental Box Relating to Sequence I	Listing.
3.		The ar	nendments have resulted in the cancellation of:		
			the description, pages		
			the claims, nos.		
			the drawings, sheets/figs		
			the sequence listing (specify):		
4.	П		eport has been established as if (some of) the amend		
	Ш		ave been considered to go beyond the disclosure as fil		
			the description, pages		
			the claims, nos.		
			the drawings, sheets/figs		
			the sequence listing (specify):		
	any table(s) related to sequence listing (specify):				
*	If ite	т 4 арр	olies, some or all of those sheets may be marked "supe	erseded."	

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Вох		Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1.	Statement			
	Novelty (N)	Claims	1-9	YES
		Claims		_ NO
	Inventive step (IS)	Claims	1-9	YES
		Claims		_ NO
	Industrial applicability (IA)	Claims	1-9	YES
		Claims		_ NO

- 2. Citations and explanations (Rule 70.7)
  - 1. Cited documents
    - D1: DE 197 28 792 A1 (BAYER AG, 51373 LEVERKUSEN, DE) 7 January 1999 (1999-01-07)
    - D2: US-A-5 260 343 (HARRISON ET AL) 9
      November 1993 (1993-11-09)

#### 2. Novelty

The present application relates to a syntactic polyurethane obtainable by reacting a polyisocyanate component (a) with a polyol component (b) in the presence of hollow microspheres (c). The polyol component (b) contains a polyether polyol based on a difunctional starter molecule (b1), a polyether polyol based on a trifunctional starter molecule having a molecular weight of 400-3500 (b2-1), a polyether polyol based on a trifunctional starter molecular having a molecular weight greater than 3500-8500 (b2-2) and a chain-lengthening agent (b3) (claim

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1). The present application also relates to the corresponding method (claim 5).

Furthermore, the present application relates to the use of a syntactic polyurethane obtainable by reacting a polyisocyanate component (a) with a polyol component (b) in the presence of hollow microspheres (c) for insulating offshore pipes (claim 6), to the corresponding offshore pipe (claim 7), and to the corresponding method for producing offshore pipes (claim 9). The polyol component (b) contains a polyether polyol based on a difunctional starter molecule (b1), a polyether polyol based on a trifunctional starter molecule (b2), and a chain-lengthening agent (b3).

D1 and D2 do not disclose a syntactic polyurethane obtainable from two polyether polyols based on a trifunctional starter molecule having a different molecular weight.

D1 does not relate to offshore pipes, but rather to windows and doors (see column 1, line 5). D2 does not relate to offshore pipes either, but to shoe soles and steering wheels (see column 2, lines 13 and 14).

Consequently, the subject matter of claims 1-9 of the present application is novel over D1 and D2.

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

#### 3. Inventive step

 $\underline{\text{D1}}$  is regarded as the closest prior art.

D1 discloses a syntactic polyurethane for insulating windows and doors, whereby a polyether polyol with a trifunctional starter molecule is used (see example 7; column 1, line 5).

The subject matter of the present patent differs from the subject matter of D1 in that two polyether polyols based on a trifunctional starter molecular with a different molecular weight are used (claims 1-5) and in that the syntactic polyurethane is used to insulate offshore pipes (claims 6-9).

The problem to be solved by the present application was that of providing polyurethanes for insulating offshore pipes (see page 1, line 41 to page 2, line 4) and of providing a further use of syntactic polyurethanes.

These problems were solved by using two polyether polyols based on a trifunctional starter molecule with a different molecular weight, and by using syntactic polyurethanes to insulate offshore pipes.

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement					
	These solutions are not suggested in D1. They				
	are not obvious from a combination of D1 and				
	D2, either.				
	Consequently, the subject matter of claims 1-				
	9 of the present application involves an				
	inventive step with respect to D1 and D2.				

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Box	No. VI	Certain documents cited			
1.	Certain p	published documents (Rule 70.10)			
		Application No. Patent No.	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
	E	P143323	23.06.2004	13.11.2003	
2.	Non-wri	tten disclosures (Rule 70.9)			
		Kind of non-written disclosure	Date of non-written dia (day/month/year	sclosure referi	Date of written disclosure ring to non-written disclosure (day/month/year)